

4. Common faults and troubleshooting



Before dismantling the motor terminal box lid and the pump, make sure the power has been off.

| Fault | Cause analysis | Troubleshooting method | Remark |
|---|--|---|--|
| Power on ,the electric pump does not operate and there's no sound | A.Power fault B.Motor fault | A.Check the power B.Whether the motor is connected through | |
| Power on , the electric pump does not operate and there's sound | A.Whether the voltage is normal B.Whether there's block of the electric pump | A.Connect correct voltage B.Clear block | |
| Operation of the motor is difficult | A.Whether the voltage is normal B.Whether the bearing is normal | A.Connect correct voltage B.Replace the bearing | |
| Water flow of the electric pump is uneven | A. The water inlet pipeline is too small B. The liquid level is too low C. Part of the water inlet pipe has been blocked by impurities | A. Enlarge the water inlet pipeline B. Try to raise the liquid level C. Check and clean dirt | |
| The electric pump operates but there's no water flow | A. The bottom valve or the check valve is locked B. The water inlet pipe leaks C. There's air in the water inlet pipe or the pump | A. Check and repair the bottom valve and the check valve B. Check and repair the water inlet pipeline C. Re-fill liquid and exclude air | |
| Power off, the electric pump operates in the opposite direction | A. The water inlet pipe leaks B. Fault of the bottom valve or the check valve C. The bottom valve is blocked on the open or partially open location | A. Check and repair the water inlet pipeline B. Check and repair the bottom valve and check valve C. Check and repair the bottom valve | |
| There's abnormal vibration and noise of the electric pump | A. Whether the electric pump and the pipeline are loosen B. The water inlet pipe is too small or partially blocked by impurities C. There's air in the water inlet pipe or the pump D. The device lift is too low compared to the pump lift E. Friction of the mechanical part of the pump | A. Reinforce the loosen part B. Increase or repair the water inlet pipeline C. Re-filling liquid and exclude air D. Improve the system or model re-selection E. Repair the pump | About item E, users shall not dismantle and repair arbitrarily |

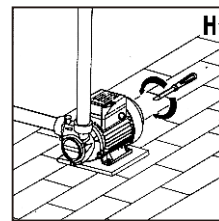
SURFACE PUMP SERIES OPERATION MANUAL



- For any alteration of the manual, no additional notice will be given.
- Under the circumstance of appropriate model selection and normal use by users, normal wear of vulnerable parts is excluded.
- The responsibility of any consequence related to quality issues caused by arbitrary dismantling by users during the warranty should be borne by users.

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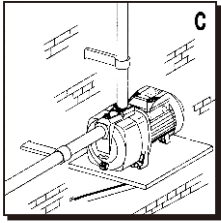
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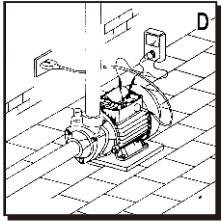
- Power on for test run after the installation of the electric pump and observe the rotation direction(see the fan, whether it is consistent with the pump direction).

3.3 Notes

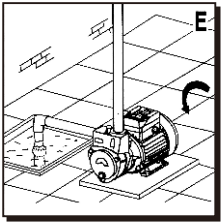
- The electric pump has to be with reliable grounding.
- Visible safety warning signs should be set on the use site to avoid accidents during the operation of the electric pump.
- The electric pump cannot start too frequently. It is suggested not starting it over 100 times per hour.
- The performance scope is taken for reference for the use of the electric pump,thus avoiding motor overload due to the overheating and overflow caused by small current.
- Pay attention if there's noise during the pump operation. In case of any abnormality, stop operation for immediate check and timely troubleshooting.
- If the electric pump is not used for a long time, please turn off the water inlet valve and cut off the power.
- When the environment temprature is lower than 0°C, if you do not use the pump, the water in the pump needs to be drained.
- Check regularly. In case of damage, replace timely.



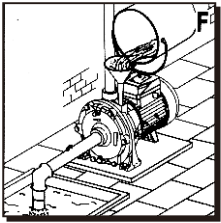
- The electric pump should be installed on the fixed ground or fixed bracket of the wall . The pump should be fixed well after installation . It should be noted that the weight of the pipeline should not be concentrated on the pump , thus avoiding deformation of the pump.



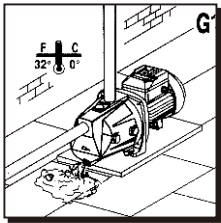
- It is necessary to install a pressure gauge on the pump exit to facilitate observation and control over the pump operation.



- When the installation position of the electric pump is higher than the liquid (within the pump absorption scope), a bottom valve should be installed on the pipeline suction end and a screw hole should be set on the water outlet pipeline for liquid filling before initiating the pump.



- To facilitate the future repair, it is suggested installing an independent cut-off valve at the water inlet and water outlet of the electric pump.



3.2 Start

- Check is necessary before pump starts
 - ① Whether the electric pump is installed firmly.
 - ② Whether there's full of water along with smooth pipeline and no block for the electric pump.
 - ③ Whether the voltage is correct.



- The electric pump has to be with reliable grounding before use.
- It is strictly prohibited to touch the electric pump in operation.
- Dehydrated rotation of the electric pump is strictly prohibited.

1. Usage and application scope

Land pump (hereinafter referred to as pump) has advantages such high efficiency, low noise, slight corrosion duration and compact structure, beautiful appearance, small volume and low weight.

1.1 Usage

- The product is applicable to neutral and non-explosive liquid with low viscosity and without solid particle or fiber. The transmitted liquid should not cause chemical corrosion of the pump material. (oil or liquid mainly by oil can be transmitted with special models of pumps)

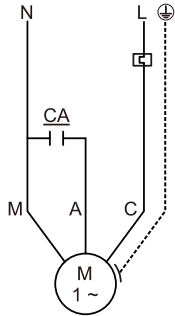
- Circulation of the air conditioning system
- Cooling system
- Water treatment (water purification)
- Industrial cleaning system
- Liquid transmission, circulation and improvement
- Hot water and cold water

1.2 Application scope

- Water temperature no higher than 35°C
- Medium PH: 6.5~8.5
- Maximum ambient temperature: +40°C
- Sand content no higher than 0.25%
- Voltage range:220-240V 50/60Hz 380-415V 50/60Hz

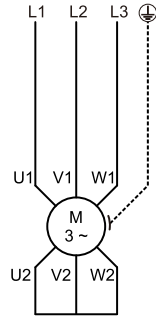
2. Wiring figure

Single phase with capacitor connection demonstration



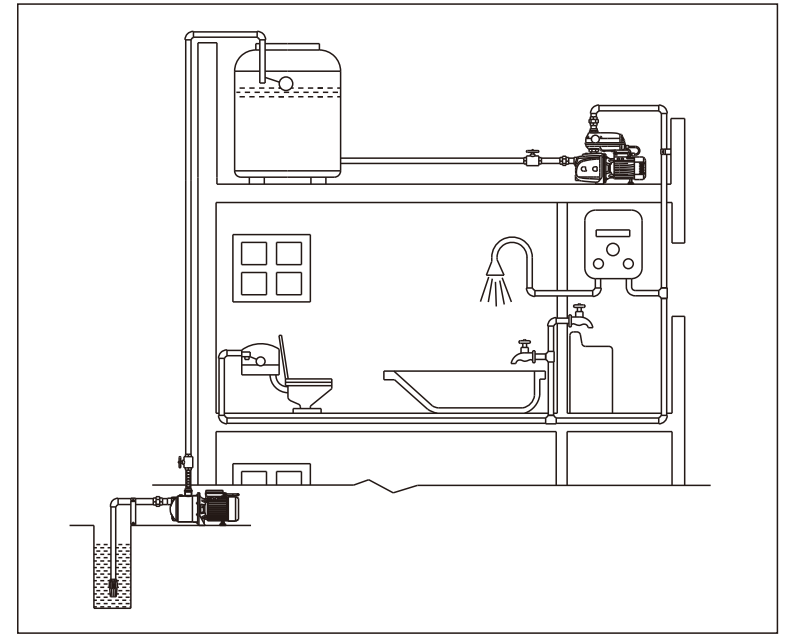
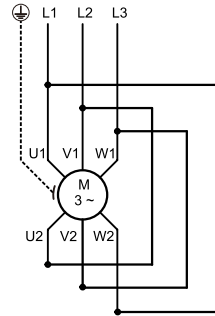
Three phase with six cable Y connection demonstration

● Connections for across-the-line starting, running, and any reduced voltage starting except WYE-DELTA type starters.

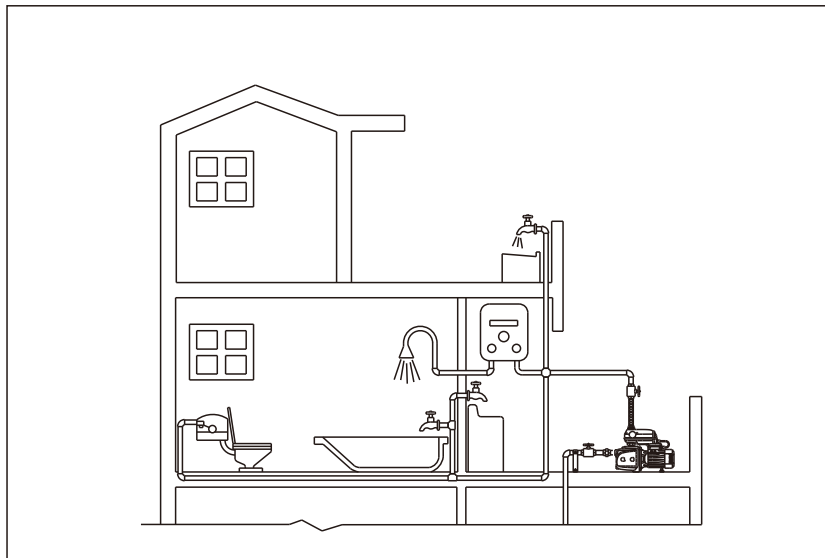


Three phase with six cable Δ connection demonstration

● WYE-DELTA starters connect the motor as shown below during starting, then change to the running connection shown at the left.



3. Use manual

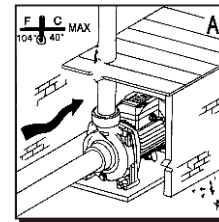


Pressure from waterpipe

Drawing-in well water and pressure from downstairs

3.1 Installation

● The electric pump should be installed in ventilated place keeping out of freeze and the installation should make it convenient for repair and replacement . In case of installation in the open air , a shield should be used to keep away from the rain; In case of indoor installation , water splashing should be prevented to avoid electric shock.



● It should be checked whether the pipeline system is well-connected and whether impurities, welding slags and dirt in the pipeline have been cleaned up before installation of the electric pump. If the existence of particles in the pipeline cannot be guaranteed, it will be necessary to install a filtering screen 0.5-1m in front of the pump mouth, so as to ensure the normal operation of the pump. A check valve should be installed on the pipeline bottom to avoid liquid backflow.

